

Application No.: 10/582,374
Filing Date: September 24, 2008

AMENDMENTS TO THE DRAWINGS

Please replace originally filed Figures 3 and 5 with the replacement Figures 3 and 5 filed herewith. Figures 3 and 5 have been amended to illustrate a solid core 8, 8'. This amendment is made to clarify the disclosure and does not add new matter. A replacement drawing, properly labeled as "Replacement Sheet," is submitted herewith in the Appendix.

REMARKS

In response to the Office Action mailed October 20, 2010, Applicant respectfully requests the Examiner to reconsider the above-captioned Application in view of the foregoing amendments and the following remarks. By this paper, Applicant has amended Claims 1-10, canceled Claim 11 without prejudice, and added new Claims 12-21. Accordingly, Claims 1-10 and 12-21 are currently pending in the present Application.

Drawings

Figures 3 and 5 have been replaced with the enclosed Replacement Sheet, which addresses the concern noted in the Office Action with respect to the presentation of the solid core 8, 8'. Accordingly, Applicant respectfully requests that the objection to the drawings be withdrawn.

Claim Objections and Rejections under 35 U.S.C. §112

In the Office Action, Claims 1-10 were rejected under Section 112 as including terminology such as “for example,” “arrangement,” “a dental given,” and “can be,” and for lacking proper antecedent basis. Applicant has amended the pending claims to clarify the language thereof and address the concerns raised in the Section 112 rejection. Accordingly, Applicant believes that the various amendments discussed above address and overcome the above noted objections and rejection noted in the Office Action.

Prior Art Rejections

Next, Applicant notes that Claims 1-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,827,576 issued to Karmaker (hereinafter “Karmaker”). While Applicant reserves the right to prosecute Claims 1-10 as originally filed, Applicant has amended Claim 1 to expedite prosecution of this Application. Claim 4 has been canceled without prejudice. Accordingly, Applicant respectfully requests that the present rejection of Claim 1, as well as the rejection of Claims 2-3 and 5-10 be withdrawn and that these claims be indicated as allowable.

Karmaker teaches a dental component that can include a fiber-reinforced composite post and one or more pins that are rigid and strong for supporting stresses occurring in the mouth. *See* Karmaker, col. 1, lines 30-40, and col. 3, lines 30-45. The post may include “impregnated fibers having a color distinct from the remainder of the fibers forming the post to assist in the identification of the post in the mouth.” *See id.* at col. 3, lines 46-49 (emphasis added). Thus, Karmaker uses fibers of the same type, but having different colors to form the post.

As illustrated in Figures 11-12 of Karmaker below, the post is deposited in the core material 44 and dentin 42. The post 50 has “a section of the fibers 52 centrally located of a different or darker color than the remainder of the fibers 54.” *Id.* at col. 3, lines 50-52. Further, Karmaker indicates that the fibers 54 “may be any transparent, translucent, or opaque color such as a white color and the colored section 52 of the fibers may be of any transparent, translucent or opaque color which is distinguishable from the white or like color of fibers 54.” *Id.* at col. 3, lines 50-56. However, even though Karmaker teaches that the fibers can have different colors, Karmaker does not teach that the fibers are made from different materials. *See id.* at col. 3, lines 52-59.

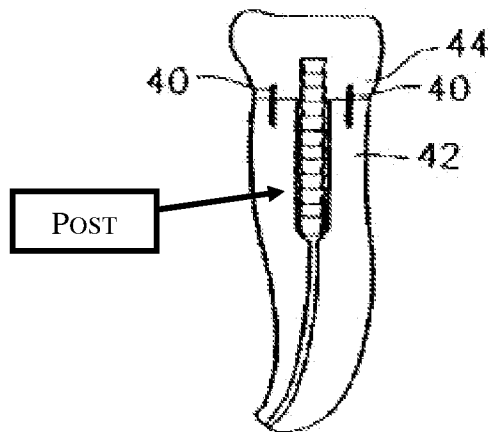


FIG. 11

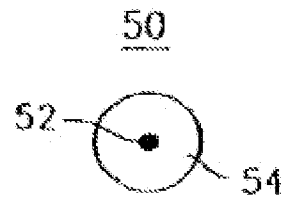


FIG. 12

Indeed, Karmaker expressly teaches that a single type of fibers is used to create a post, but that the single type of fibers is given different coloring. For example, Karmaker indicates to create a post, a single type of fibers is prepared using two differently colored batches: one batch is impregnated with a pigment-containing resin for forming an inner portion of the post (e.g. fibers 52 in Figure 12 above) and another batch that is impregnated with a pigment-free resin for

forming an outer portion of the post (e.g. fibers 54 in Figure 12 above). *See id.* at col. 3, line 63 to col. 4, line 3. Alternatively, Karmaker indicates that some of the single type of fibers can be “coated with a pigment” for forming an inner portion of the post (e.g. fibers 52 in Figure 12 above) while others are impregnated non-pigmented fibers for forming an outer portion of the post (e.g. fibers 54 in Figure 12 above). *Id.* at col. 4, lines 3-7. Again, Karmaker never teaches that the fibers of the post are made from different materials, only that they are different colors.

Further, although Karmaker teaches that the post can be made of a ceramic material, the ceramic post merely includes a differently colored section and does not include fiber reinforcement. *See id.* at col. 4, lines 12-18. Instead, Karmaker teaches that, the “ceramic post may include any ceramic materials including but not limited to alumina, zirconia, mullite, silica, leucite and carbides and may be fabricated by using any forming and sintering techniques. The differently colored section provides easy detection of the post in the mouth.” *Id.* Karmaker does not teach or otherwise disclose that the “differently colored section” could comprise fibers, whether made of ceramic or otherwise. In contrast, embodiments of a dental replacement component within the scope of Claim 1 comprise materials of a different type and color.

For example, Claim 1 recites a dental replacement component comprising, *inter alia*,

[A] reinforcing element which comprises carbon fiber wires, which are arranged in one or more carbon fiber hoses . . . , wherein the carbon fiber part, at least in its portion or portions directed toward the surrounding area, supports or is provided with additional fiber material, wherein the additional fiber material comprises aluminum oxide fibers.

Carbon fiber is of a dark color and the aluminum oxide fibers are of a light color. *See also* Claims 3 and 5 (clarifying that the additional fiber material of the replacement component is designed “to cover the dark color of the carbon fiber” and that the additional fiber material can be “substantially white”). Accordingly, Applicant respectfully submits that Karmaker fails to disclose at least the above-noted features of Claim 1. For example, in contrast to Claim 1 which recites the use of different types of fibers that have different colors, Karmaker only discloses the use of one type of fibers that is colored differently, whether by pigmented resin or a coating. *See* Karmaker, col. 3, line 63 to col. 4, line 3. As discussed further below, these distinctions provide unique advantages that are not taught or otherwise disclosed in Karmaker.

Applicant also notes that although Karmaker discloses a ceramic post that can comprise alumina, Karmaker does not teach or otherwise disclose the use of aluminum fibers, as recited in

Claim 1. *See id.* at col. 4, lines 12-18. Further, Karmaker does not teach or otherwise disclose that the ceramic post can be combined with any other type of fibers, such as carbon fibers. *See id.*

Instead, the only configuration or form of alumina discussed by Karmaker is the particle form. Specifically, Karmaker teaches that the posts comprise a polymeric matrix having a filler that is made of materials, such as alumina, provided in particle form. *See id.* at col. 5-6 (“Particularly suitable fillers for dental filling-type materials prepared in accordance with this invention are those having a particle size ranging from about 0.1-5.0 microns” (emphasis added)). This alumina particle filler is clearly not a fiber. Applicant respectfully submits that these teachings not only fail to provide any reasonable basis for believing that Karmaker teaches alumina fibers, but that Karmaker teaches away from using alumina fibers.

In contrast to Karmaker, embodiments of the dental component recited in Claim 1 provide important advantages based on the use of a reinforcing element having carbon fiber wires that form a carbon fiber part surrounded by additional fiber material of a different type and color. *See* Publication of Present Application, ¶¶ [0005]-[0006], [0025] and Abstract. As a result, the dental component is extremely strong and durable due to the presence of the strong core fibers, while maintaining superior aesthetics due to the presence of the surrounding fibers. *See id.* Applicants have thus obtained excellent strength and mechanical properties while minimizing the visibility and obtrusiveness of the reinforcing element. *See id.* at ¶ [0005]-[0006]. While Karmaker discloses the use of multiple colors, Karmaker is devoid of any discussion of the design or benefits of using core fibers that provide unique strength or mechanical properties that are different from a differently colored surrounding fiber, as in some embodiments of the dental component recited in Claim 1. These advantageous features of Claim 1 are not taught, suggested, or otherwise disclosed in the cited art.

Therefore, Karmaker fails to teach each and every feature recited in Claim 1, and a prima facie case of obviousness cannot be supported. Accordingly, Applicant requests that the rejection of Claim 1, as well as dependent Claims 2-10 be withdrawn and that these claims be indicated as allowable over the art of record.

New Claims

Applicant has added new Claims 12-21. These claims are believed to be allowable for similar reasons as discussed above with respect to Claim 1. For example, Claim 12 recites in part, a dental replacement component comprising a “carbon fiber part, at least in its portion or portions directed toward the surrounding area, [that] supports or is provided with additional fiber material with a color which better matches said coloring than does the carbon fiber, wherein the additional fiber material comprises para-aramid fibers.” Applicant respectfully submits that Claim 12 is allowable. Further, Claims 13-21 depend upon Claim 12 and for at least this reason are in condition for allowance. Accordingly, Applicant respectfully requests that Claims 12-21 be allowed.

No Disclaimers or Disavowals

Although the present communication may include alterations to the Application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this Application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this Application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present Application.

CONCLUSION

Applicant respectfully submits that the above rejections and objections have been overcome and that the present Application is now in condition for allowance. Therefore, Applicant respectfully requests that the Examiner indicate that Claims 1-10 and 12-21 are now acceptable and allowed. Accordingly, early issuance of a Notice of Allowance is most earnestly solicited.

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Applicant respectfully submits that the claims are in condition for allowance in view of the above remarks. Any remarks in support of patentability of one claim, however, should not be imputed to any other claim, even if similar terminology is used. Additionally, any remarks referring to only a portion of a claim should not be understood to base patentability on that portion; rather, patentability must rest on each claim taken as a whole. Applicant respectfully traverses each of the Examiner's rejections and each of the Examiner's assertions regarding what the prior art shows or teaches, even if not expressly discussed herein. Although amendments have been made, no acquiescence or estoppel is or should be implied thereby. Rather, the amendments are made only to expedite prosecution of the present Application, and without prejudice to presentation or assertion, in the future, of claims on the subject matter affected thereby. Applicant also has not presented arguments concerning whether the applied references can be properly combined in view of, among other things, the clearly missing elements noted above, and Applicant reserves the right to later contest whether a proper reason exists to combine these references and to submit indicia of non-obviousness.

The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the claim and drawings in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is respectfully requested to call Applicant's attorney in order to resolve such issue promptly.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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Dated: January 20, 2011

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